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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,579	01/31/2006	Takeshi Azami	Q92766	5131
23373 SUGHRUE MI	7590 03/30/200 ON, PLLC	EXAMINER		
2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			MICALI, JOSEPH	
			ART UNIT	PAPER NUMBER
			1793	
			MAIL DATE	DELIVERY MODE
			03/30/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. Extension of time may be available under the provision of 37 CFR 1.78(i). Into event nower, may a reply be timely filled. If NO period for reply is specified above, the maximum statutory period vill applys and vill expire SIX (5) MONTHS from the mating date of this communication. Fallants for reply with the sort or examined period for regly is specified above. The maximum statutory period vill applys and vill expire SIX (5) MONTHS from the mating date of this communication. Fallants for reply with the sort or examined period for regly is specified above. The maximum statutory period vill apply and vill expire SIX (5) MONTHS from the mating date of this communication, over if simily field, may reduce any sented period for regly is specified above. The maximum statutory 2009. Status Status 1) Responsive to communication (s) filled on 13 February 2009. 2a This action is FINAL. 2b) This action is non-final. 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims 4) Claim(s) 1-10 is/are pending in the application. 4) Claim(s) 1-10 is/are pending in the application. 4) Claim(s) 1-10 is/are allowed. 5) Claim(s) 1-10 is/are ellowed. 6) Claim(s) 1-10 is/are ellowed. 7) Claim(s) 1-10 is/are ellowed. 8) Claim(s) 1-10 is/are espected to by the Examiner. 10) The drawing(s) filled on 1-10 is/are elected to by the Examiner. Application Papers 9) The specification is objected to by the Examiner. 10) The drawing(s) filled on 1-10 is/are: a) accepted or b) objected to by the Examiner. Application Papers 9) The specification is objected to by the Examiner. Note the attached Office Action or form PTO-152. Priority under 35 U.S.C. § 119 110 Acknowledgment is made of a claim for foreign		Application No.	Applicant(s)					
Joseph V. Micali 1793	Office Action Comments	10/566,579	AZAMI ET AL.					
The MAILING DATE of this communication appears on the cover sheet with the correspondence address— Period for Reply A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHIGHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. Estatestion from temps as evaluation under the provisions of 3CTR 1.1391. In some evaluation was prefy be timery flat of the communication of the provision of 3CTR 1.1391. In some evaluation was prefy be timery flat of this communication. Failure to etyp vision the out or considerably provider visit will apply and will explicate to be communication. Failure to etyp vision the out or considerably provider visit will be provided provider for yet will be communication. Failure to etyp vision the out or considerably provider visit will be applicated to be supplicated to be communication. Failure to etyp vision the out of the street than three months after the mailing case of this communication. Paying received by the Origin that provide provider visit that exploration. Status Status Status Status Status Status This action is FINAL. 2b) This action is finance with the practice under Exparte Quayle, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims 4) Claim(s) 1-10 isfare pending in the application. 4a) Of the above claim(s) 6-9 isfare withdrawn from consideration. 5) Claim(s) 1-10 isfare pending in the application. 4a) Claim(s) 1-10 isfare pending in the application of Claims 9) The specification is objected to by the Examiner. Application Papers 9) The specification is objected to by the Examiner. Application Papers 9) The specification is objected to by the Examiner. 10) The drawing(s) filed on isfare rejected. 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152. Priority under 35 U.S.C. § 119 11) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b Some communication of the priority documents have been received in A	Oπice Action Summary	Examiner	Art Unit					
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Information Disclosure Statement(s) (PTO/SB/08) 5) Notice of Informal Patent Application								
	3) Information Disclosure Statement(s) (PTO/SB/08)							
	Paper No(s)/Mail Date	6)						

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DETAILED ACTION

Status of Application

The amendment filed on February 13th, 2009 has been entered. Claims 1-5 and 10 are pending and presented for examination on the merit. Claims 6-9 have been withdrawn. The previous objection to the specification with regards to the length of the abstract has been withdrawn in light of applicant's amendment.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3, 5, and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,878,360 by Ohsaki et al.

With respect to claims 1 and 5, Ohsaki teaches a carbon fibrous manufacturing apparatus. Specifically, Ohsaki teaches both a generation chamber which generates the nanocarbon or nanofibers as well as a recovery chamber for recovering the generated nanocarbon or nanofibers (abstract, figures 1-3, column 6, line 62 – column 7, line 32, and column 12, line 66 – column 13, line 10). A moistening unit, specifically a wet type spraying unit which sprays water or an organic liquid onto the carbon fibers, is located in the recovery chamber (column 13, lines 4-10).

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With respect to claim 3, Ohsaki teaches a carrier pipe guiding the nanocarbon into the recovery chamber, both with regards to the initial recovery chamber (ejector chamber) and the final recovery chamber (final collection chamber) (figures 1-3, column 10, lines 48-52, and column 12, lines 66-67).

With respect to claim 10, Ohsaki teaches a recovery chamber with an inclined bottom face, specifically with the ejector chamber (**figures 1-3**)

Claim Rejections - 35 USC § 103

- 3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
- 5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,878,360 by Ohsaki et al, as applied to claim 1 above, and further in view of Japanese Patent No. 10-273308 by Achinami et al.

With respect to claim 2, Ohsaki does not explicitly teach a graphite target, nor a light source which irradiates light onto a surface of the graphite target.

Achinami discloses a method for producing carbon nanotubes, wherein a graphite-containing carbon rod is positioned in a quartz tube arranged in an electric furnace and laser light is irradiated onto the carbon rod in an inert gas atmosphere to deposit carbon nanotubes on the inner wall face of the quartz tube (claims 1-3 and drawing 1).

At the time of invention it would have been obvious to a person of ordinary skill in the art to perform the process of Ohsaki including the addition of a graphite target to be irradiated with light from a light source, in view of the teaching of Achinami. The suggestion or motivation for doing so would have been to maintain better control over the final nanocarbon products' chief characteristics, such as diameter of fiber, by use of a graphite target methodology (**Achinami**, **paragraph 0006**).

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,878,360 by Ohsaki et al in view of Japanese Patent No. 10-273308 by Achinami et al, as applied to claim 2 above, and further in view of US Patent No. 6,171,451 by Miley et al.

With respect to claim 4, Ohsaki, while teaching a moistening unit in the recovery chamber, does not teach a secondary moistening unit in the generation chamber.

Achinama does not teach a moistening unit or spray unit in addition to the apparatus.

For the secondary moistening unit element, Miley describes a device for the production of nanocarbons, specifically fullerenes, including a soot extraction mechanism for removing and collecting the fullerenes. The apparatus comprises a means of carbon soot extraction for removal and collection of said complex carbon molecules by a "wash

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down" method (claim 3). This "wash down" method is further limited to a system of spraying an appropriate liquid onto the internal surfaces of the gas containment vessels in order to remove accumulated soot (claim 31). Finally, the aforementioned moistening unit is located within the generation chamber.

At the time of invention it would have been obvious to a person of ordinary skill in the art to perform the process of Ohsaki and Achinami including the addition of a secondary moistening unit located in the generation chamber, in view of the teaching of Miley. The suggestion or motivation for doing so would have been to collect and move along the nanocarbon produced in the generation chamber (Miley, column 10, lines 40-43).

Response to Arguments

7. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment has forced the examiner to continue a prior art search. In view of the newly amended claim 1 with "a moistening unit which moistens generated nanocarbon is provided in said recover chamber", examiner has made a new rejection supra which takes into account this limitation.

Conclusion

- 8. Claims 1-5 and 10 are rejected.
- 9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph V. Micali whose telephone number is (571) 270-5906. The examiner can normally be reached on Monday through Friday, 7:30am to 5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry A. Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Joseph V Micali/ Examiner, Art Unit 1793 /Michael A Marcheschi/ Primary Examiner, Art Unit 1793